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AUTHOR Cohen, Gillian; Miller, Christine; Stonehill, Robert; Geddes, Claire

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ABSTRACT

This report by the U.S. Department of Education highlights the benefits of the Class-Size Reduction program that was passed by Congress in 1998. Prior to this federal program, more than 85 percent of students were in classes with over 18 children. However, 1 year after its inception, the program enabled 1.7 million young children to learn in smaller, more personalized, classrooms. The program allowed schools to hire approximately 29,000 new teachers, and as a direct result, 61,000 additional teachers saw their class sizes shrink. Class-Size Reduction funds helped create more manageable classrooms so that teachers could focus on teaching and learning and spend less time on discipline. The program has turned around low-performing schools, has improved reading achievement, and has boosted individualized instruction and classroom management. The report discusses how federal dollars are sent to where they have the greatest impact, and it offers several anecdotes from teachers who testify to the benefits of the program. It describes ways to support state efforts at class-size reduction and offers specific examples of state programs that have benefited children. The text details research that supports the efficacy of class-size reduction, and explains how such program work and why they are cost effective. (RJM)

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ED 446 349

The Class-Size Reduction Program

Boosting Student Achievement in Schools Across the Nation

A First-Year Report

U.S. Department of Education
September 2000

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Richard W. Riley
U.S. Secretary of Education

Michael Cohen
Assistant Secretary for Elementary and Secondary Education

Joseph Conaty
Director, New Projects Unit

Robert Stonehill
Director, Class-Size Reduction Program

September 2000

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Gillian Cohen, Christine Miller, Robert Stonehill and Claire Geddes at the U.S. Department of Education wrote this report.

The Class-Size Reduction Program:

Boosting Student Achievement in Schools Across the Nation

A First-Year Report

Reducing class size is one of the most important investments we can make in our children's future. Recent research confirms what parents have always known -- children learn better in small classes with good teachers, and kids who start out in smaller classes do better right through their high school graduation.

--President Bill Clinton

Parents and teachers have long known that smaller classes make a difference. Students in smaller classes have higher achievement levels, fewer discipline problems, and more personal attachment to their teachers and classmates. A growing body of well-designed research, including experimental research using random assignment, is confirming this conventional wisdom. In 1998, Congress responded to President Clinton's call for a national initiative to lower class size in the early grades to no more than 18 students. Research indicates that classes that small are effective in helping to improve academic achievement, especially for disadvantaged students.

That year, Congress made a bipartisan commitment to provide a down payment on a proposed seven-year phase-in of the Class Size Reduction program. The fiscal year (FY) 1999 appropriation of $1.2 billion enabled school districts across the nation to hire an estimated 29,000 new teachers for the 1999-2000 school year. This July, the U.S. Department of Education awarded an additional $1.3 billion in FY 2000 funds to enable states and local school districts to continue their class-size reduction efforts. This report highlights the benefits of the Class-Size Reduction program after just one year of implementation. Though this is only a modest beginning to reach our nationwide goal, the past year saw 1.7 million young children learning in smaller, more personalized, classrooms.

The Class-Size Reduction Program Is Making A Difference

Too many children in this country spend their early school years in overcrowded classrooms. As a result, children – particularly poor and minority children – do not receive the individualized attention they need. They do not learn to read well and independently, and are too likely to fall through the cracks.

Prior to the implementation of the federal Class-Size Program and similar initiatives in several states, more than 85 percent of our students were in classes with over 18 children, and about 33 percent were in classes of 25 or more students.[1]

[1] Data from *Study of Education Resources and Federal Funding*. U.S. Department of Education, 2000.

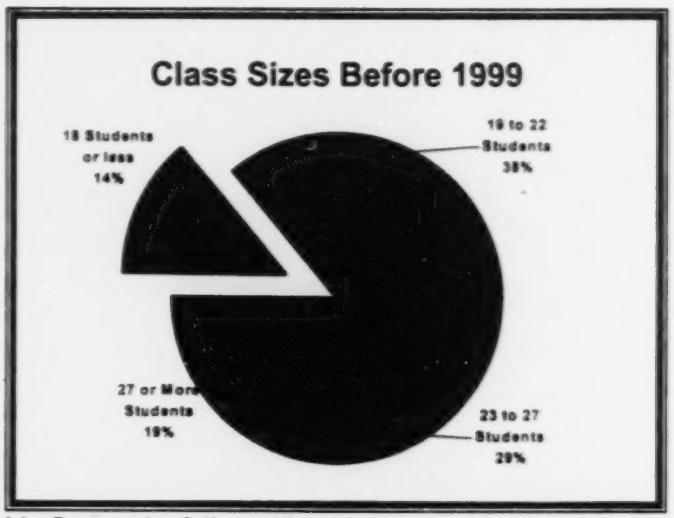
However, after just one year of implementation, the federal Class-Size Reduction Program is already helping local communities lower class size in the early grades. In 90,000 classrooms (primarily in high-needs schools), the average class size in grades 1-3 has been reduced from 23 to 18. Smaller classes give children across the country the opportunity for a solid foundation in the basics and increase their chances of academic success in the later grades.

The Class-Size Reduction program has helped an estimated:

- 1.7 million children in the early grades receive instruction in smaller, more personalized classes;
- 90,000 teachers who now teach more manageably-sized classes;
- 23,000 schools – almost one-third of the nation's elementary schools – that have hired one or more new teachers; and,
- 15,000 school districts that improved teacher recruitment and hiring or provided professional development to help teachers maximize the benefits of smaller classes.

Last year, the Class-Size Reduction program enabled schools to hire approximately 29,000 new teachers. As a direct result, 61,000 additional teachers saw their class sizes shrink.

- In the 1999-2000 school year, districts receiving Class-Size Reduction funds reported that their classes would have been significantly larger without such funds. Districts reported that almost half (49 percent) of the classes would have had 23 or more students per class, nearly a third (32 percent) would have had 25 or more, and 17 percent would have had 27 or more students per class. National data, shown in the chart below, paints the same general picture.[2] Without federal funding, 86 percent of classes would have been larger than the recommended average class size of 18 students.



- However, schools that hired teachers with their Class-Size Reduction funds were able to reduce the average class size from about 23 students to 18 in the targeted grades.

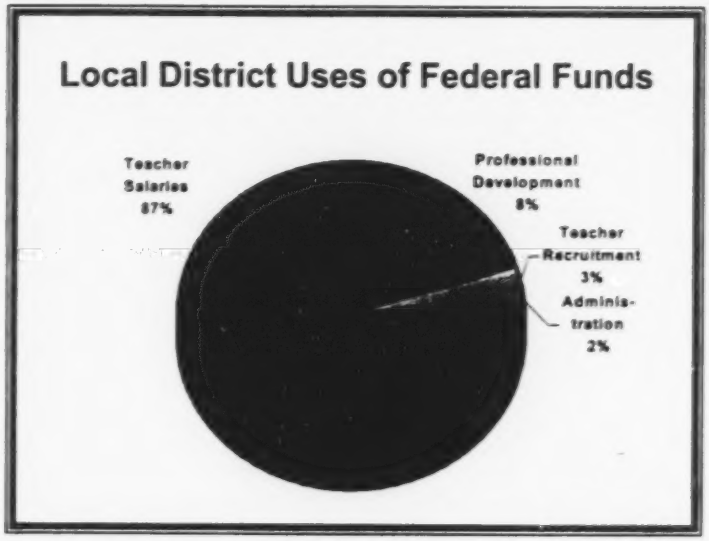
- Approximately 86 percent of hired teachers were placed in the early grades. The greatest number (39 percent) were placed in first grade, followed by third grade (24 percent) and then second grade (23 percent). About 15 percent were placed in other grades, usually in districts where they already had small classes in the early grades.

[2] Data from the Study of Education Resources and Federal Funding, U.S. Department of Education, 2000.

- About one percent of the teachers hired were special education teachers.

Class-Size Reduction Funds Directly Impact Classrooms

Every dollar provided for the Class-Size Reduction program goes to local school districts. No funds are retained at the national or state levels for administration. As the chart below illustrates, 87 percent of the funds are being used to hire teachers while only 2 percent of the money is used for administrative activities at the local level.



Federal Class-Size Reduction funds help create more manageable classrooms. This allows teachers to focus on teaching and learning and spend less time dealing with discipline problems.

Small classes and small schools lay the foundation for safe schools. They promote stronger bonds between teachers and students that lead to an improved school climate and fewer discipline problems and disruptions. More personal classroom environments allow teachers to give more individualized attention to each of their students, permitting them a better opportunity to identify troubled children and recommend counseling before violence occurs.

Smaller classes help improve teacher morale. Teachers in smaller classes spend less time on discipline and classroom management and more time providing instruction to children. This raises their level of job satisfaction. In addition, smaller classes can enable teachers to implement strategies learned in preparation programs but which they are unable to practice because of the sheer number of students in their classrooms.

Smaller Classes Result in Better Teaching and Learning

Local districts report using Class-Size Reduction funds to directly support urgent priorities and improve achievement where the need is the greatest. Smaller classes are rapidly becoming an integral component of school reform efforts. For instance:

Turning Around Low-Performing Schools.

Washington, D.C. is one of a number of districts that used their Class-Size Reduction funds to support local efforts to turn around low-performing schools. The District targeted its $5.6 million allocation to 32 schools identified as low-achieving. Each site that received a grant hired one additional teacher. Hendley Elementary used its money to hire an additional teacher for the first grade, allowing it to reduce class sizes from 24 to 18 in all four of its first-grade classrooms. The school met all six of its performance objectives for the 1999-2000 school year, including a decrease in the number of students in first grade scoring below the basic level. The District also registered an increase in the number at both the proficient and advanced levels in both reading and math. First-grade teachers at Hendley report greater satisfaction with students' achievement, motivation, and skills when they are able to provide instruction to a smaller number of children.

Columbus, Ohio used its $3 million Class-Size Reduction allocation to hire 58 fully certified teachers, placing them in 13 high-poverty, low-performing schools. In these schools, the program has reduced class size in grades one through three from 25 students to approximately 15. These schools, as well as others in Columbus, are implementing proven models of reading instruction, such as *Success for All*. Teachers receive the professional development and support needed for effective implementation of these models.

Improving Reading Achievement

Anne Arundel County, Maryland combined federal, state and local funds to support its early reading initiative. Anne Arundel used its Class-Size Reduction allocation of just over $1 million to hire 19 first- and second-grade teachers for their highest-need schools. In 2000-2001, it will hire three teachers who will be deployed in the same manner. The district also received county funding to hire 30 more teachers to further reduce class sizes. By coordinating the use of its local and federal funds, Anne Arundel will reduce class sizes in grades one and two from an average of 25 children per class to an average of 15. Georgetown East Elementary, a high-poverty school that also used federal Title I funds to reduce class sizes, improved their first and second grade reading performance to the point that the school is now among the top three elementary schools in the county. Other Maryland school districts, such as Montgomery County, have used federal, state, and local class-size reduction funds to boost the impact of early reading initiatives.

West Middlesex Area School District, Pennsylvania. West Middlesex used its 1999 Class-Size Reduction allocation to hire two new first grade teachers (one at Luther Low Elementary and one at Oakview Elementary). As a result of the two new teachers, each school reduced class sizes in the first grade from 23 students per class to 18. During the 1999-2000 school year, students' scores on the Iowa Test of Basic Skills in reading, language, and mathematics improved over the scores from the previous year. The students' overall grade equivalent scores increased from 1.9 to 2.1.

South Delta School District, Mississippi, located in the rural west-central Delta region, serves two high-poverty counties where all students are eligible for free lunch and all schools are designated as Title I "school-wides." The district used its $118,760 allocation to hire three teachers, enabling the district to reduce average class sizes in grades 1 through 3 in its elementary school from 26 students to 21. Having fewer students in each class has helped South Delta to implement its new reading initiative more effectively. Teachers now have more time to analyze students' particular strengths and weaknesses through their Analytical Reading Inventory and can provide more one-on-one instruction to better meet students' individual needs. Teachers also report having more time to plan, allowing them to develop more creative and engaging lessons for students.

Trinity Area School District, Washington, Pennsylvania. The Trinity Area School District used its 1999 allocation to hire two teachers to reduce class size in the first and second grades at Trinity South Elementary from 25 to 15 students. After just one year of this intervention, first graders improved by four percentage points over the previous year on the district-level writing standards; second graders showed a three percent increase. The improvement in reading was even more dramatic. Between 1999 and 2000, the number of first-grade students scoring at 80 percent or higher on performance tasks improved by 12 percentage points. For second graders, these numbers improved by 21 percentage points.

Improving Individualized Instruction and Classroom Management.

Rockford School District 205, Illinois. Rockford, the third largest school district in Illinois, has a poverty rate of 62 percent. With the $797,963 it received, the district hired 19 additional primary grade teachers. As a result, the district was able to reduce the number of students in 43 other classrooms (including 35 first grade classrooms). Without federal support, the average class size in these grades would have been about 26 students. With Class-Size Reduction funds, Rockford reduced class sizes in the targeted grades to 17-18 students per class. When surveyed, teachers said they were able to increase the attention given students and improve early identification of reading problems as a result of the smaller classes.

Fredericksburg County, Virginia. Fredericksburg used its Class-Size Reduction funds to hire two third grade teachers to team teach at the Hugh Mercer Elementary School. While one teacher works with small groups of students to provide instruction in reading, writing, or mathematics, the other teacher works with the remaining students. At any given time, students are receiving instruction in a group no larger than 18 students.

Federal Funds Go Where They Will Have the Greatest Impact

Because federal Class-Size Reduction funds are targeted to districts with the highest concentrations of children in poverty as well as those with the highest overall enrollments, large urban districts have received a significant portion of the available funds. Within these districts, monies to hire teachers are generally targeted to schools with the greatest needs or with the largest class sizes.

The following table shows how some of the nation's largest districts have used their Class-Size Reduction funds to hire additional teachers.[3]

Estimates of Teachers Hired With Federal Class-Size Reduction Funds in Urban School Districts

School District	Current Class-Size Reduction Allocation	Teachers Hired	Estimated Allocation for 2001
Anchorage	$1,845,702	40	$2,654,546
Atlanta	$3,110,313	58	$4,938,553
Birmingham	$1,562,510	23	$2,138,425
Boston	$3,545,000	38	$4,992,309
Broward County, FL	$4,132,500	74	$6,617,673
Cleveland	$4,981,000	82	$6,791,335
Columbus	$3,037,137	58	$4,140,978
Dallas	$5,171,868	75	$7,808,009
Denver	$2,583,983	12	$3,699,074
Des Moines	$854,694	29	$1,228,049
Detroit	$13,315,320	240	$18,095,999
El Paso	$1,700,000	51	$2,566,503
Fort Worth	$2,513,796	58	$3,795,097
Houston	$8,379,760	167	$12,650,988
Indianapolis	$2,649,205	32	$3,791,959
Jefferson County	$2,779,119	92	$3,737,504
Long Beach	$2,700,000	15	$4,316,221
Los Angeles	$26,300,000	203	$42,043,188
Memphis	$3,861,000	76	$5,451,375
Mesa, AZ	$1,119,873	32	$1,660,265
Miami-Dade	$10,718,155	207	$17,163,762
Milwaukee	$6,218,480	97	$8,784,270
Nashville	$1,811,871	33	$2,558,194
New Orleans	$4,520,913	109	$5,795,426
New York City	$61,190,120	808	$95,806,879
Norfolk	$1,393,861	27	$1,994,396
Oklahoma City	$1,482,261	41	$2,279,899
Omaha	$1,508,098	30	$2,150,783
Orange County	$2,550,276	72	$4,076,872
Philadelphia	$12,795,416	288	$17,298,116
Pittsburgh	$2,365,675	42	$3,198,155
Richmond	$1,200,000	25	$1,717,012
Rochester	$2,376,000	41	$3,720,162
Sacramento	$1,900,000	31	$3,037,341
Salt Lake City	$661,092	20	$943,490
San Antonio	$2,886,204	46	$4,357,324
San Diego	$3,868,104	63	$6,183,552
San Francisco	$1,606,764	37	$2,568,573
Seattle	$1,560,686	37	$2,203,601
Tucson	$1,604,269	52	$2,378,404

[3] Council of Great City Schools (1999). U.S. Department of Education budget estimates
Note: Estimates for 2001 are based on each district's share of its State's allocation

New York City Takes Big Steps with Smaller Class Sizes

For many years, class sizes in New York City have been among the largest in New York State, averaging about 28 children per class in elementary schools. In 1999-2000, New York City received $61 million in Federal Class-Size Reduction funds. In addition, the city received some $49 million in state funds to reduce class size. The state and federal funds were used to create about 950 new, smaller classes in grades K-3, with an average of about 20 students per class. New classes were created in 530 of the district's 675 elementary schools. Since every new class that was created helped reduce the size of other classes in that grade, the New York City Board of Education estimates that 30 percent of students in kindergarten through grade 3 are in smaller classes as a result of the initiative.

The independent Educational Priorities Panel recently completed a study of the first year of the class-size reduction program in New York City. Among improvements reported as a result of smaller classes were:

- Noticeable declines in the number of disciplinary referrals;
- Improved teacher morale;
- a focus on prevention rather than remediation; and
- higher levels in classroom participation by students.

In addition, the study noted that while it was still too early to make definitive judgments, students placed in smaller classes appeared to be learning faster than when they were in larger classes. In schools where there was not the space to create enough new classes, some of the federal money was used for an "alternative approach." One such approach was to provide classrooms with an additional teacher to give more individualized and small group instruction to students for a significant block of time on a regular basis. The Board of Education hired only teachers for this purpose, not paraprofessionals, in line with research that shows that the educational benefits of pairing a paraprofessional with a teacher in a regular-size classes are negligible.

In summary, the report offers the following recommendation:

> *At this point, the New York City class-size reduction program has every indication of success, and will most likely lead to significant improvements in student outcomes if the legislative support for this program is sustained and expanded.*

Source: Haimson, L. (April 2000). *Smaller is Better: First-hand Reports of Early Grade Class Size Reduction in New York City Public Schools*. New York, NY: Educational Priorities Panel.

Teachers Report Results From Reducing Class Size

Smaller class sizes allow our teachers and students to do the best they can. Teachers do not teach most effectively when they are hampered by the burden of too many students in the classroom.
--U.S. Secretary of Education Richard W. Riley

Teachers throughout the country report experiencing significant benefits from smaller classes. For instance:

> *I had a good idea of each child's basic ability by the first week of school, because I had more time to spend with each child individually. I knew very early on who to watch for potential learning and behavior problems....Each child also had more time to share his thoughts and ideas in both oral and written form... There also were few behavior problems...Since everything that we did this year took so much less time than usual, we were able to do so much more...*
>
> **--Teacher in West Middlesex, Pennsylvania**

> *We have had practically no discipline problems. The children are more like a team and they expect the best from each other. This saves a great mount of our instructional time. ...I had only one child (from my class of 19) fail reading for the first six-week grading period. This alone is proof that the children are receiving more individualized instruction and they are greatly benefiting from class size reduction.*
>
> **--Teacher in Mississippi**

> *All children in this city, this state, this country are entitled to the benefits of smaller classes. Speaking as an educator, it should not be a privilege, it should be a right.*
>
> **--Principal Norma Genao, P.S. 185, Harlem, New York**

Supporting State Efforts: Sparking a National Movement

Over 20 states across the country have instituted their own efforts to lower class size, and the flexibility of the federal program has allowed for close coordination between the federal and state programs. Last year, at least two new states – Georgia and Massachusetts – began investing their own resources in smaller classes and improving student achievement. In some other states, class-size reduction initiatives have been in place for more than a decade. For instance:

- ***Massachusetts*** appropriated $18 million to the Aid to Reduce Class Size in grades K-3. The initiative will be targeted to schools in which at least 22 percent or more of the children come from low income households. The funds may also be used to extend half-day kindergarten to full-day kindergarten. The first installment of the Aid to Reduce Class Size funds will be used in the 2000-2001 school year.

- ***Indiana*** began its program to reduce class size - known as "Prime Time" - in 1984. As a result, some districts already had achieved the targeted levels of 18 students in first grade and 20 students in third grade when federal funds became available. Of the 295 districts in the state, 268 participated in the federal program in 1999-2000, with 20 of the districts choosing to reduce class size in intermediate and middle school classrooms. Other districts utilized federal funds by reducing primary classrooms even further, or by hiring specialists to teach reading in small groups. A total of 59 districts used all of their funds for professional development.

- ***Minnesota*** began its statewide program in 1993. In the latest two-year budget cycle, $100 million was allotted to reduce class size, about $50 million each for the 1999 and 2001 school years. The program emphasizes kindergarten and first grade, and a class-size goal of 17 students. Since the availability of federal Class-Size Reduction funds, some small, rural districts were able to coordinate the use of their federal and state funds to hire one teacher. Although a few districts hired teachers for the fourth and fifth grades, the vast majority – 95 percent – focused on kindergarten through third grades.

Class-Size Reduction in Wisconsin Grows Dramatically

Federal Class-Size Reduction funds are helping Wisconsin advance the reform efforts begun in 1996 through the SAGE (Student Achievement Guarantee in Education) program, which helps participating schools reduce student-teacher ratios to 15:1 in grades K-3. According to the Wisconsin Department of Public Instruction, evidence of the SAGE program's success has prompted the state legislature and the governor to dramatically increase funding to allow 400-500 more elementary schools to participate next school year. In FY 2000, SAGE will be funded at $58.8 million. In FY 1999, Wisconsin received $20.1 million in Federal funds that local districts used to hire approximately 475 teachers. Of that total, districts used $1.4 million (7 percent) to provide professional development to teachers.

According to the third-year evaluation report of the program, SAGE is fostering an enthusiasm for learning that is boosting student achievement. Results from achievement tests show statistically higher performance for SAGE students across all grade levels when compared to comparison schools with similar characteristics. African-American SAGE students scored lower on a pretest than African-American students in comparison schools but made significantly larger gains and surpassed achievement by African-American students in comparison schools on the post-tests. The study is finding that smaller classes provide:

- high levels of classroom efficiency;
- a positive classroom atmosphere;
- expanded learning opportunities; and
- enthusiasm and achievement among both students and teachers.

The federal program has been able to complement SAGE and support local reform efforts. The U.S. Department of Education has worked with Wisconsin to eliminate barriers to class-size reduction efforts in local districts. For example, Wisconsin was granted waivers allowing districts to use more than 15 percent of their funds for professional development and to serve children in kindergarten.

Source: Molnar, A., Smith, P., Zahorik,J., Palmer, A., Halbach, A. and Ehrle, K. (2000). Wisconsin's Student Achievement Guarantee in Education (SAGE) Class Size Reduction Program: Achievement Effects, Teaching and Classroom Implementation. *The CEIC Review*, Volume 9, Number 2 (March).

California's Class-Size Reduction Program Continues to Develop and Show Results

California established its statewide class-size reduction program beginning with the 1997-1998 school year. An ongoing study of the program is showing that smaller classes have boosted student achievement in communities across the state for the second year in a row. Children throughout California, regardless of their socioeconomic background, race or ethnicity, are benefiting from being in smaller classes.

- Third grade students in smaller classes performed better on achievement tests than third graders in larger classes for the second year in a row. These achievement gains persisted after the students returned to larger classes in fourth grade.
- In 1998-1999, over 1.8 million students in 92,000 classrooms (K-3) benefited from reduced class size. Over 92 percent of California students in K-3 were in classes of 20 or smaller, and only 9 districts in the State were not participating in the initiative.
- The percentage of fully certified teachers in grades K-3, which had dropped from 98 percent in 1995 to 88 percent in 1997, remained fairly steady in the third year of class-size reduction, dropping only 1 percent further in 1998 (to 87 percent).

The federal program allows California the flexibility needed to address the serious problems of teacher quality and to reduce class sizes in the schools that need it the most. In the 1999-2000 school year (which has not yet been included in the ongoing state evaluation), districts in California:

- used 25 percent of their federal CSR funds for professional development to upgrade the skills of teachers, an amount triple the rate of other states;
- used $129,177,936 of these funds to hire about 2,000 new teachers; and
- assigned three-quarters of these new teachers to grades 4 and 5, thus enabling the class-size reduction initiative to extend beyond grade 3.

Federal Class-Size Reduction funds are helping California expand its statewide initiative in several important areas. For example:

- The federal program is targeted to the neediest schools, where the research shows that students can benefit most from reduced class sizes. In this way, the federal program sends more of its funds to disadvantaged schools that have not yet fully benefited from the California program. This can help teachers become fully certified and schools can hire additional fully certified teachers. The federal program also takes very seriously the requirement that funds be used to hire only fully certified teachers. The U.S. Department of Education sent a notice to all district superintendents, including all those in California, reminding them of this requirement.
- The federal program provides resources to hire teachers before requiring classes to be small. The California program mandates that districts reduce their class sizes before they receive any funds. This created a financial hardship for some districts. The federal program distributes resources up front, so districts can hire as many teachers as they can afford to without having to take resources from other programs.

Source: Stecher, B.M. and Bohrnstedt, G.W., Eds. (2000). *Class size reduction in California: 1998-99 evaluation findings*. Class-Size Reduction Consortium, Year 2 Evaluation Report. Palo Alto, CA: American Institutes for Research.

Research Continues to Show that Small Classes Boost Achievement

Evidence continues to accumulate that shows that reducing class size improves student achievement, reduces discipline problems, and provides a lasting benefit to both students and teachers. During the past year, more and more research studies showing the positive effects of reducing class size have been completed, including:

- *The Tennessee Project STAR (Student-Teacher Achievement Ratio) Data* - New reports from the Project STAR class-size reduction experiment clearly show that students who spent more years in small classes realized greater gains in student achievement in all subjects than did students who participated for fewer years. They also show the benefits of participating in smaller classes continued well beyond the time the students were in small classes.[4]

- *The Wisconsin SAGE Program* - New results from Wisconsin add independent evidence of the benefits of smaller classes. After two years, the impact of reduced class size in Wisconsin's SAGE program appears consistent with the Tennessee STAR study results. The size of the SAGE evaluation and the strength of its results suggest that class-size reduction in early grades yields significant gains in student achievement. SAGE results also suggest that high-quality team teaching (where two fully qualified teachers share a classroom with 30 or more students) has results similar to those obtained in self-contained classrooms.[5]

- *National Assessment of Educational Progress Data* - A new RAND study, led by David Grissmer, examined 1990, 1992, 1994, and 1996 National Assessment of Educational Progress (NAEP) data from representative samples of 2,500 students in 44 states to look at the effect of state characteristics, including class size, on student achievement. The study showed that, controlling for students' family backgrounds, states with the lowest pupil-teacher ratios in the early grades had the highest NAEP scores.[6]

- *State Assessment Data* - The American Institutes for Research analyzed the performance of a national sample of schools on their respective state assessments. The study concluded that reduced class size is significantly related to higher academic performance, particularly in reading. The positive impact of smaller classes on reading achievement also was found in middle and high schools. This study also showed that students benefited not only from small class sizes but gained additional benefit from attending high schools with lower enrollment overall.[7]

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[4] Finn, J., Gerber, S., Farber, S., and Achilles, C. (2000). Teacher Aides: An Alternative to Small Classes? *The CEIC Review*, Volume 9, Number 2 (March).
Boyd-Zaharias, J. and Pate-Bain, H. (2000). Early and New Findings from Tennessee's Project STAR. *The CEIC Review*, Volume 9, Number 2 (March).

[5] Molnar et al, 2000.

[6] Grissmer, D., Flanagan, A., Kawata, J. and Williamson, S. (2000). *Improving Student Achievement: What State NAEP Test Scores Tell Us*. Santa Monica, CA: RAND.

[7] McLaughlin, D. and Dori, G. (forthcoming). School-level Correlates of Reading and Mathematics Achievement in Public Schools. Pp. 189-236 in Grissmer, D. and Ross, M. (Eds.) *Analytic Issues in the Assessment of Student Achievement*. Santa Monica, CA: RAND.

This overwhelming body of evidence from independent researchers using different data and methodologies, and both experimental and quasi-experimental methods, clearly demonstrates that reducing class sizes in the early grades improves student achievement.

Investing Wisely: Reducing Class Size as a Cost-Effective Strategy

The accumulating evidence not only shows that class-size reduction is an effective strategy for improving academic performance, but also is a cost-effective one, particularly for students who need help the most. For instance:

- *National Data* - The RAND report described above also concludes that "...to raise achievement scores, the most efficient and effective use of education dollars is to target states with higher proportions of minority and poor students *with funding for lower pupil-teacher ratios*, more widespread kindergarten efforts, and more adequate teaching resources."[8]

- *Tennessee STAR Data* – Because teachers are expensive, hiring paraprofessionals is frequently cited as an alternative investment. However, Jeremy Finn (a professor at the State University of New York at Buffalo), after a careful reexamination of the STAR data, found that adding paraprofessionals to the classroom does little to improve student achievement. He concluded that resources used to hire teaching assistants in the classroom could be better spent on reducing class size by hiring qualified teachers.

- *Reanalysis of Previous Research* – In his recent research, Alan Kreuger, an economist at Princeton University and the National Bureau of Economic Research, concludes that there are substantial and significant returns to reducing class size in the early grades.[9] Kreuger also argues that resources would be optimally allocated if targeted toward those who would benefit most from smaller classes - children and schools in high poverty districts. Kreuger's findings are based on reanalyses of data from literature reviews conducted by Eric Hanushek (a professor at the University of Rochester), in which the author concluded that class-size reduction is not a cost-effective investment.[10]

During the past year, researchers, policy makers, and educators participated in a national conference sponsored to address a broad range of questions related to implementation, including recruitment, professional development and student behavior.[11] In general, the research on class size suggests that teachers of smaller classes confront fewer discipline problems, cover subject matter in more depth, have more one-to-one contact with students, and keep better track of student progress. School principals and district superintendents also report that smaller classes have allowed them to establish and maintain better relationships with students, parents and families. These are the type of improvements that save school districts money over time.[12, 13]

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[8] Grissmer, D., Flanagan, A., Kawata, J., and Williamson, S. (2000). *Improving Student Achievement: What State NAEP Test Scores Tell Us*. Santa Monica, CA: RAND.

[9] Kreuger, A. (2000). An Economist's View of Class-Size Research. CEIC Review, Volume 9, No. 2 (March).

[10] Hanushek, E. (1999). Some Findings From an Independent Investigation of the Tennessee STAR Experiment and From Other Investigations of Class Size Effects. Pp. 143-164 in Special Issue-Class Size: Issues and New Findings. *Education Evaluation and Policy Analysis*, Volume 21, Number 2 (Summer).

[11] Wang, M. (2000). How Small Classes Help Teachers Do Their Best: Recommendations from a National Invitational Conference. *The CEIC Review*, Volume 9, Number 2 (March).

[12] Brophy, J. (2000). How Might Teachers Make Smaller Classes Better Classes? *The CEIC Review*, Volume 9, Number 2 (March). Achilles, C. (1999). *Let's Put Kids First, Finally: Getting Class Size Right*. Thousand Oaks,

The Federal Class-Size Reduction Program: How It Works

The U.S. Department of Education's Class-Size Reduction program was enacted just over a year ago as part of the 1999 Department of Education Appropriations Act. With that bipartisan legislation, Congress made a $1.2 billion down payment on President Clinton's proposal to help local communities hire 100,000 qualified teachers over seven years to reduce class size in grades one through three to a national average of 18 students per class. In FY 2000, Congress provided a small increase that brought the appropriation to $1.3 billion. This year, the president's budget proposal asks Congress to provide an additional $450 million in funding, raising the total to $1.75 billion for the 2001-2002 school year. This funding increase will enable local communities to hire as many as 20,000 additional teachers, for a total of 49,000 teachers hired with Class-Size Reduction funds.

Program funds are distributed to states by a defined formula. All 50 states, the District of Columbia, and Puerto Rico participate in the program (See Appendix A). Since needs are greatest in the poorest communities, and because research shows that smaller classes provide the greatest benefits to the most disadvantaged students, the program targets funds to high-poverty communities. Each state distributes 80 percent of the funds to school districts based on the number of poor children in each district. The remaining 20 percent is distributed on the basis of total enrollment.

Class-Size Reduction funds go directly to our nation's classrooms. Every dollar appropriated by Congress is allocated to local school districts. No funds may be used for federal or state administrative costs, and within school districts, no more than three percent of the money may be used for administrative costs. Because small classes make the greatest difference when teachers are well-trained, school districts may use up to 25 percent of the funds for providing professional development to both newly hired and experienced teachers. The remainder of the funds may be used for recruiting and hiring fully qualified regular and special education teachers and teachers of children with special needs, including teachers certified through state and local alternative routes.

Because average class size varies considerably from district to district, and often from school to school within a district, districts are encouraged to target program resources to schools with the highest average class sizes and the children most in need of more individualized instruction. The Class-Size Reduction Program provides flexibility to accommodate these school districts, as well as the growing number of districts that will reach a class-size target of 18 students as a result of the program. Districts that have already reduced class size in the early grades to 18 students (or reached comparable state goals) have flexibility. They may use program funds to make further reductions in those grades, to reduce class size in other grades, or to take other steps to improve the quality of teaching in small classes.

CA: Corwin Press. Achilles, C. and Finn, J. (2000). Should Class Size Be A Cornerstone for Education Policy? *The CEIC Review*, Volume 9, Number 2 (March).

[13] Hanson, M. (2000). Using Class-Size Reduction Research to Create a Learning Community: A Case Report of Gundry Elementary School. *The CEIC Review*, Volume 9, Number 2 (March).

Making Class-Size Reduction Even More Effective

In the 2000-2001 school year, $1.3 billion is available for the second year of the Class-Size Reduction program. These funds will enable districts to continue to support the teachers hired during the previous school year and, depending upon the size of a district's allocation and its needs, may allow districts to hire more teachers or carry out additional recruiting or professional development activities.

In addition, a few modifications were made to the Class-Size Reduction program requirements to help local districts implement the program more effectively. These changes are in direct response to state and district concerns. Among the modifications made were:

- Providing districts that receive allocations less than the amount necessary to hire an additional teacher with greater flexibility in the uses of their funds;
- Including kindergarten as one of the early grades;
- Placing even more emphasis on ensuring that teachers hired with program funds are fully qualified;
- Allowing states and districts to substitute state or local class-size reduction goals for the national goal; and,
- Inserting new public reporting requirements for states, participating districts, and schools.

Further Reductions Will Help Meet a Critical National Priority

It is essential that federal funds be invested in *proven* education reforms - approaches that produce results consistently and reliably. Students and taxpayers deserve nothing less. A growing body of solid research shows that reducing class size meets this test, as do the experiences of some 1.7 million students in 23,000 schools and 90,000 classrooms nationwide.

Reducing class size is not a silver bullet. We must continue to see that all students have access to high standards, well-prepared teachers, increased public school choice, and more accountable schools. Many students need the extended learning time provided by afterschool and summer school programs, along with extra help from teachers, parents, tutors and mentors. But providing students with smaller classes must be part of our strategy to improve our schools. With the evidence now available, there are no excuses for not acting now.

That is why in 1998 President Clinton proposed a seven-year program to bring class size in the early grades to a national average of 18 students per class. Twice, Congress has responded on a bipartisan basis to the president's proposal, providing enough funds to help local communities hire some 29,000 additional teachers. This year the administration has proposed to expand the effort by seeking $1.75 billion to help local communities hire an additional 20,000 teachers. The net effect of this investment will be to substantially reduce class size in a total of 150,000 classrooms, and to provide higher quality and more personalized instruction to approximately 2.5 million children. We are confident that this investment, which will be used to place well-trained and highly qualified teachers into classrooms with a manageable number of children, will significantly bolster student achievement around the nation.

Contact Us!

For more Information on the Class-Size Reduction Program, contact the U.S. Department of Education by:

- Internet: www.ed.gov/offices/OESE/ClassSize/
- E-mail: class_size@ed.gov
- Fax: (202) 260-8969

Appendix A—Class-Size Reduction Allocation Estimates for FY 2001, by State

State	FY 1999 Allocation	FY 2000 Allocation	FY 2001 Estimate
ALABAMA	$19,413,279	$21,039,181	$26,568,688
ALASKA	5,623,097	6,094,043	8,087,314
ARIZONA	17,508,087	18,974,426	25,956,565
ARKANSAS	11,623,964	12,597,496	16,771,634
CALIFORNIA	129,177,934	139,996,859	206,503,890
COLORADO	13,164,489	14,267,043	18,845,486
CONNECTICUT	11,353,179	12,304,031	15,971,909
DELAWARE	5,623,097	6,094,043	8,087,314
DISTRICT OF COLUMBIA	5,623,097	6,094,043	8,087,314
FLORIDA	51,848,131	56,190,521	83,028,189
GEORGIA	29,909,345	32,414,315	47,490,039
HAWAII	5,623,097	6,094,043	8,087,314
IDAHO	5,623,097	6,094,043	8,087,314
ILLINOIS	50,137,659	54,336,793	68,551,170
INDIANA	20,096,000	21,779,082	28,764,560
IOWA	9,449,330	10,240,731	13,577,075
KANSAS	9,582,885	10,385,472	13,535,643
KENTUCKY	19,641,601	21,286,626	26,415,049
LOUISIANA	29,471,026	31,939,287	37,779,350
MAINE	5,623,097	6,094,043	8,087,314
MARYLAND	17,485,082	18,949,494	24,813,476
MASSACHUSETTS	22,447,648	24,327,685	31,612,299
MICHIGAN	50,275,610	54,486,298	68,326,363
MINNESOTA	16,662,118	18,057,605	23,272,582
MISSISSIPPI	19,208,820	20,817,599	24,146,938
MISSOURI	20,568,788	22,291,467	29,426,014
MONTANA	5,623,097	6,094,043	8,087,314
NEBRASKA	5,827,594	6,315,667	8,311,057
NEVADA	5,623,097	6,094,043	8,087,314
NEW HAMPSHIRE	5,623,097	6,094,043	8,087,314
NEW JERSEY	27,414,745	29,710,787	39,622,535
NEW MEXICO	9,619,782	10,425,459	14,790,712
NEW YORK	104,517,491	113,271,050	163,730,161
NORTH CAROLINA	24,678,787	26,745,687	36,217,944
NORTH DAKOTA	5,623,097	6,094,043	8,087,314
OHIO	46,139,496	50,003,776	62,908,804
OKLAHOMA	13,529,819	14,662,970	20,810,521
OREGON	11,564,476	12,533,025	16,291,963
PENNSYLVANIA	50,982,529	55,252,423	68,923,253
PUERTO RICO	40,440,447	43,827,419	53,729,060
RHODE ISLAND	5,623,097	6,094,043	8,087,314
SOUTH CAROLINA	14,495,110	15,709,106	22,032,804
SOUTH DAKOTA	5,623,097	6,094,043	8,087,314
TENNESSEE	20,066,133	21,746,713	28,331,524
TEXAS	97,206,460	105,347,705	146,753,343
UTAH	7,691,587	8,335,773	10,977,199
VERMONT	5,623,097	6,094,043	8,087,314
VIRGINIA	21,038,247	22,800,245	30,102,427
WASHINGTON	19,619,284	21,262,440	27,701,322
WEST VIRGINIA	11,301,032	12,247,517	15,016,312
WISCONSIN	20,118,645	21,803,624	28,419,744
WYOMING	5,623,097	6,094,043	8,087,314
Outlying Areas/BIA	6,000,000	6,000,000	8,750,000
Evaluation	0	0	2,000,000
Total	$1,200,000,000	$1,300,000,000	$1,750,000,000